

SEARCH REQUEST FORM**Scientific and Technical Information Center**

Requester's Full Name: Deborah Lambin Examiner #: 71300 Date: 2/6/03
 Art Unit: 1626 Phone Number 30 8-4522 Serial Number: 09/886,044
 Mail Box and Bldg/Room Location: CMI 3E23 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

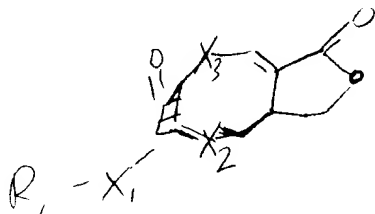
Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Cyclophosphamide

Inventors (please provide full names): Lazlo Verteg et al

Earliest Priority Filing Date: _____

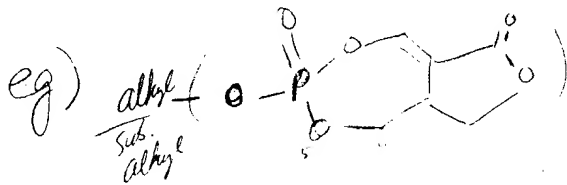
**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*



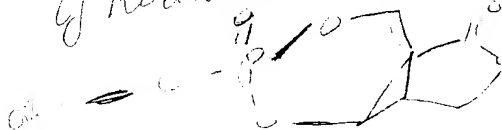
$R_1 = \text{cyclyl}$

$X_1 =$
 X_2
 X_3 } O, S, N, C

$E = P, S$



Partial search for alkyl
 of non-symmetric leave

**STAFF USE ONLY**

Searcher: Sheppard

Searcher Phone #: 308-4499

Searcher Location: _____

Date Searcher Picked Up: _____

Date Completed: 2/6/03

Searcher Prep & Review Time: _____

Clerical Prep Time: _____

Online Time: _____

Type of Search

NA Sequence (#) _____

AA Sequence (#) _____

Structure (#) _____

Bibliographic _____

Litigation _____

Fulltext _____

Patent Family _____

Other _____

Vendors and cost where applicable

STN _____

Dialog _____

Questel/Orbit _____

Dr Link _____

Lexis/Nexis _____

Sequence Systems _____

WWW/Internet _____

Other (specify) _____

=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 14:12:04 ON 06 FEB 2003

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FILE COVERS 1907 - 6 Feb 2003 VOL 138 ISS 6

FILE LAST UPDATED: 5 Feb 2003 (20030205/ED)

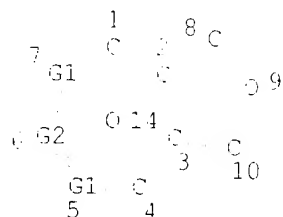
This file contains CAS Registry Numbers for easy and accurate substance identification.

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L4 STR

O 12



VAR G1=O/N/S/C

VAR G2=P/S

NOTE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE

L5 32 SEA FILE=REGISTRY SSS FUL L4

L6 26 SEA FILE=HCAPLUS ABB=ON PLU=ON L5

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L6 ANSWER 1 OF 26 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:410371 HCAPLUS

DOCUMENT NUMBER: 137:168939

TITLE: Cyclipostins, novel hormone-sensitive lipase-inhibitors from Streptomyces sp. DSM 13381: II. Isolation, structure elucidation and biological properties

AUTHOR(S): Vertesy, Laszlo; Berk, Bernd; Bronstrup, Marc; Ehrlich, Klaus; Kurz, Michael; Müller, Dieter; Schummer, Dietmar; Seibert, Gerhard

CORPORATE SOURCE: LG Natural Products Research, Germany

SOURCE: Journal of Antibiotics (2000), 55(4), 460-464

CODEN: JANTAJ; ISSN: 0021-8820

PUBLISHER: Japan Antibiotics Research Association

DOCUMENT TYPE: Letter

LANGUAGE: English

GI



- I R=R³=Me, R¹=CH, R²=H
 II P=P²=Me, R¹=R²=H
 III R=R¹=H, R²=R³=Me
 IV R=Me, R¹=R²=H, R³=Et

AB Hormone-sensitive lipase (HSL) is a key enzyme of lipid metab. and its control is therefore a target in the treatment of diabetes mellitus. Cultures of the Streptomyces species DSM 13381 have been shown to potently inhibit HSL. Ten inhibitors of HSL, termed cyclipostins, have been isolated from the mycelium of this microorganism and a further nine related compds. detected. Their structures were characterized by 2-D NMR expts. and by mass spectrometry and were found to comprise neutral cyclic enol phosphate esters with an addnl. gamma.-lactone ring. On account of their ester-bound fatty alc. side chain, the cyclipostins have physicochem. properties similar to those of triglycerides. The outstanding characteristic of the cyclipostins is their strong anti-HSL activity, with IC50 values in the nanomolar range. The in vitro and in vivo activities of cyclipostins A, P, P2, and S (I.fwdarw.IV, for inhibition are reported.

IT 372083-50-6P, Cyclipostin A 372091-46-8P, Cyclipostin P
 372091-94-6P, Cyclipostin P2 372092-03-0P, Cyclipostin S
 RL: PAC (Pharmacological activity); PEP (Properties); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(isolation, structure elucidation, and biol. properties of the hormone-sensitive lipase inhibitors cyclipostins from Streptomyces DSM 13381)

IT 372090-27-2P, Cyclipostin F 372090-93-2P, Cyclipostin N
 372091-96-8P, Cyclipostin R 372091-98-0P, Cyclipostin R2
 372092-04-1P, Cyclipostin T 372092-05-2P, Cyclipostin T2
 FL: PEP (Properties); PUR (Purification or recovery); PREP (Preparation)
 (isolation, structure elucidation, and biol. properties of the hormone-sensitive lipase inhibitors cyclipostins from Streptomyces DSM 13381)

IT 372088-34-1P, Cyclipostin A2 372091-95-7P, Cyclipostin Q
 372092-36-9P, Cyclipostin B 372092-41-6P, Cyclipostin C

372092-43-8P, 372092-44-9P,
372092-46-1P, 372092-51-8P,
447408-07-3P,

(c: Streptococcus DSM 11104)

REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

16 ANSWER 2 OF 16: HILTON CENTER, RT 12, ARL

ACCESSION NUMBER : 68-0798-0001

DOCUMENT NUMBER : 06-1879-10

TITLE: Cytoplasmic, peroxisomal, and mitochondrial β -oxidation of fatty acids in the developing rat brain

INVENTOR(S): Vertesy, Laszlo; Hamilton, Klaus; Kuro, Norihito; Wang,
Joseph

PATENT ASSIGNEE(S) : Germany

SOURCE: U.S. Pat. Appl. Publ., 12 pp., Cont.-in-part of U. S. Pat. No. 847,124.

DOI: 10.1002/for

DOCUMENT TYPE: 14-000

LANGUAGE: ENGLISH

FAMILY ACC. NUM. COUNT: .

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPL. NO. IN CN	DATE
US 2002008645	A1	20000516	US 2001-836044	20010622
DE 10021131	A1	19991115	DE 1000-1001781	20000504
WO 20010-3497	A1	20011108	WO 2001-EP4652	20010425

W:	AE, AG, AL, AM, AT, AU, AZ, BA, BE, BG, BF, BY, BE, CA, CH, CN,
	CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, FR, GR, GB, GH, GM,
	HR, HU, ID, IL, IN, IS, JP, KE, KG, KH, KR, KU, LV, LY, MA, ME, MG,
	MT, MU, MV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NG, NI, NL, NO,
	RU, SD, SE, SG, SI, SK, SL, SN, TH, TR, TT, TZ, UA, UG, UZ, VC,
	YU, ZA, ZW, AM, AZ, BY, EG, EZ, MD, RU, TC, TM
RW:	GH, GM, KE, LS, MW, KZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
	DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
	EJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLM. INFO.: DE 2000-10021731 A 20000504
WO 2001-EP4652 W 20010425
US 2001-843377 A2 20010503

OTHER SOURCE(S): MARRPAT 116:380111
GI

A diagram showing a set of points labeled R^2 , O , X^3 , E , O , R^1X^1 , X^2 , and I . The points are arranged in a roughly circular pattern with lines connecting some of them, forming a network.

AB The invention provides compds. I [R1 = (un)branched (un)satd. (un)substituted carbo- or heterocyclic C2-30 chain, (un)substituted (aryl)(CH₂)_nm (m, n = 0-3); E2 = (un)substituted C1-6 alkyl, (un)substituted C2-6 alkenyl, (un)substituted C2-6 alkynyl; E = P, S; X1-X3 = O, NH, N, S, etc.], obtained by culturing *Streptomyces* species HAG 004107 (DSMZ 13311), and their physiol. tolerable salts and chem. equiv.

The invention furthermore provides a process for the production of cyclipostins, the microorganism HAS 00417 (DSM 13381), the use of cyclipostins and their physiol. tolerable salts and equiv. thereof in pharmaceuticals, in particular as inhibitors of lipases and agents for treating diabetes, and pharmaceutical preps. which contain cyclipostin or a physiol. tolerable salt or equiv. thereof.

IT 372083-50-6P, Cyclipostin A 372088-34-1P, Cyclipostin A2
 372090-27-2P, Cyclipostin F 372090-93-2P, Cyclipostin N
 372091-46-8P, Cyclipostin F 372091-94-6P, Cyclipostin F2
 372091-95-7P, Cyclipostin Q 372091-96-8P, Cyclipostin F
 372091-98-0P, Cyclipostin R 372092-03-0P, Cyclipostin S
 372092-04-1P, Cyclipostin T 372092-05-2P, Cyclipostin T2
 372092-36-9P, Cyclipostin F 372092-41-6P, Cyclipostin F
 RL: RBN (Biosynthetic production); NPL (Natural product occurrence); IAT (Pharmacological activity); PUR (Purification procedure); THU (Therapeutic use); BIOL (Biological study); OCC (Occurrence); PREP (Preparation); USES (Uses)
 (cyclipostins, fermentative prodn., and pharmaceutical use)

L6 ANSWER 1 OF 25 SCAPLES COPYRIGHT 2003 AIS

ACCESSION NUMBER: 2001:316678 SCAPLES

DOCUMENT NUMBER: 135:356841

TITLE: Method for the production of cyclipostins obtained by the cultivation of the Streptomyces species HAS 00417 (DSM 13381) and their use as inhibitors of lipases

INVENTOR(S): Vertesy, Laszlo; Ehrlich, Klaus; Kurz, Michael; Wink, Joachim

PATENT ASSIGNEE(S): Aventis Pharma Deutschland G.m.b.H., Germany

SOURCE: PAT Int. Appl., 56 pp.

CODEN: PLXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001033497	A1	200111108	WO 2001-EP1452	20010425
W:	AF, AG, AL, AM, AN, AU, AC, BA, BB, BG, BE, BY, BZ, CA, CH, CN, CO, CF, CU, CC, DE, DK, DM, DE, EE, ES, FI, GB, GD, GE, GH, GM, HE, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KI, LC, LK, LR, LS, LT, LU, LV, MA, MT, MG, MK, MU, MW, MX, MY, NO, NI, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TC, TH, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, BG, BE, BR, BU, BU, TH, TH			
RW:	GH, GM, KE, LS, MW, MG, SD, SL, SN, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BG, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
DE 10031731	A1	200111115	DE 1000-10031731	20000504
EP 1280812	A1	20030205	EP 2001-936175	20010425
E:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
US 2002058645	A1	20020516	US 2001-886044	20010622

PRIORITY APPLN. INFO.:

DE 2000-10021731 A 20000504

WO 2001-EP1452 W 20010425

US 2001-847277 A2 20010503

OTHER SOURCE(S): MARPAT 135:356841

GI

IT 372083-50-6P, Cyclospatin A 372092-36-9P, Cyclospatin B
372092-41-6P, Cyclospatin C
FI: FAC (Biological activity or effector, except adverse); BCC (Biological
occurrence); ENU (Biological study, unclassified); FRP (Properties); PUR
(Purification or recovery); RCT (Reactant); THU (Therapeutic use); BICL
(Biological study); COC (Occurrence); PREP (Preparation); RACT (Reactant
or reagent); URES (Uses)

IT 372088-34-1P, Cyclipostin A2 372090-27-2P, Cyclipostin F
372090-93-2P, Cyclipostin M 372091-46-8P, Cyclipostin P
372091-94-6P, Cyclipostin R2 372091-95-7P, Cyclipostin Q
372091-96-8P, Cyclipostin E 372091-98-0P, Cyclipostin R2
372092-03-0P, Cyclipostin S 372092-04-1P, Cyclipostin T
372092-05-2P, Cyclipostin TM 372092-43-8P, Cyclipostin D
372092-44-9P, Cyclipostin E

IT 372092-46-1, Cyclopoetin G 372092-51-8, Cyclopoetin H
 RL: BAC (Biological activity or effector, except adverse); BCC (Biological
 occurrence); ECU (Ecological study, unclassified); THU (Therapeutic use);
 BIOL (Biological study); OCCU (Occurrence); USES (Uses)

L6 ANSWER 4 OF 26 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:133711 HCAPLUS
DOCUMENT NUMBER: 130:337674
TITLE: Pyrolysis of tricyclic cyclobutane-fused sulfolanones as
a route to cis-1,2-divinyl compounds and their
Cope-derived products
AUTHOR(S): Aitken, R. Alan; Cadogan, J. I. G.; Gosney, Ian;
Humphries-Buchan, Caroline M.; McLaughlin, Leo M.;

CORPORATE SOURCE: Wyse, Stuart J.
 Department of Chemistry, The University of Edinburgh,
 Edinburgh, EH9 3JL, UK
 SOURCE: Journal of the Chemical Society, Perkin Transactions
 1: Organic and Bio-Organic Chemistry (1996), 1, 605-614
 CODEN: JCPRB4; ISSN: 0360-6376
 PUBLISHER: Royal Society of Chemistry
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 140:83764

AB Functionalization of the double bond of 3-thiabicyclo[3.2.0]hept-6-ene,
 readily formed by cyclization of the [1,2]-cycloaddition of 3-sulfolene and
 maleic anhydride, hexahydrothieno[3',4':3,4]cyclopenta[1,2-d]furan-1,3-
 dione 5,5-dioxide (1) with, for example, cis-1,2-divinyl compounds, gives
 tricyclic sulfones with the bicyclo[3.3.0]oct-4-ene skeleton. Flash vacuum
 pyrolysis 3-thiabicyclo[3.2.0]hept-6-ene 3,3-dioxide results in
 stereospecific extrusion of SO₂ to give Z-hexa-1,3,5-triene which
 undergoes electrocyclicization to give 1,3-cyclohexadiene while reaction of
 3-thiabicyclo[3.2.0]hept-6-ene 3,3-dioxide with LiAlH₄ results in
 non-stereospecific extrusion to give Z- and E-hexa-1,3,5-triene. Upon
 flash vacuum pyrolytic tricyclic sulfones lose SO₂ to give 1,2-divinyl
 products by Cope rearrangement of the initially formed cis-1,2-divinyl
 intermediates. The 1,3-dipolar cycloaddition of nitrile oxides and a nitrene
 to the double bond of 3-thiabicyclo[3.2.0]hept-6-ene 3,3-dioxide gives
 tricyclic sulfones with the tricyclo[5.3.0.0^{2,5}] skeleton and a wider
 variety of these can be prepd. by conventional reactions of
 hexahydrothieno[3',4':3,4]cyclopenta[1,2-c]furan-1,3-dione 5,5-dioxide.
 Upon flash vacuum pyrolysis these lose SO₂ to give stable cis-1,2-divinyl
 compds. The Diels-Alder adducts were prepd. from 3-thiabicyclo[3.2.0]hept-
 6-ene 3,3-dioxide and these behave differently upon flash vacuum
 pyrolysis, losing SO₂ and a tailene to give tetrasubstituted benzenes, in
 the latter case by way of an unexpected tetracyclic intermediate.

IT 224576-83-4P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (22prepn. of cis-divinyl compds. and their Cope-derived products via
 pyrolysis of tricyclic cyclobutane-fused sulfolanes)

IT 33974-24-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (prepn. of cis-divinyl compds. and their Cope-derived products via
 pyrolysis of tricyclic cyclobutane-fused sulfolanes)

IT 224576-81-2P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (prepn. of cis-divinyl compds. and their Cope-derived products via
 pyrolysis of tricyclic cyclobutane-fused sulfolanes)

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 26 HCAPUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 1996:042171 HCAPUS
 DOCUMENT NUMBER: 125:261671
 TITLE: Disugars A and B, novel and selective
 acetylcholinesterase inhibitors from *Penicillium* sp.
 40-425). I. Screening, taxonomy, fermentation,
 isolation and biological activity
 AUTHOR(S): Furo, Fumio; Otaguro, Kazuhiko; Shioiri, Kazuro;
 Iwai, Yuturu; Omura, Satoshi
 CORPORATE SOURCE: Research Center Biological Function, The Kitasato
 Institute, Tokyo, 108, Japan
 SOURCE: Journal of Antibiotics (1996), 49(9), 743-747
 CODEN: JANTAJ; ISSN: 0021-8820

PUBLISHER: Jpn. Antibiotic Res. Assoc. (JARA)
 DOCUMENT TYPE: Patent
 LANGUAGE: English

AB *In vitro* screening method for selective acetylcholinesterase (AChE) inhibitors was established. Inhibitory activity of AChE and butyrylcholinesterase (BuChE) was measured and the culture broths of microorganisms that showed selective inhibition against AChE were characterized. By using this method, a strain producing the novel and selective inhibitors of AChE, aminotriazoles A and B, was picked out among over seven thousand strains tested. Aminotriazole was obtained as white powder from the culture broth of the strain. Amino triazoles, trietereams P and I and cytoprotholol and cytoprotholol derivatives against AChE. Aminotriazole and trietereams are members of the heterocyclic compounds. They showed potent inhibitory activities against AChE with IC_{50} values in range of 1.0-approx.20.8 nM. Furthermore, they showed greater than 2000-fold more potent inhibition against AChE than BuChE.

IP **144773-26-2P**, Cyclophosphin

RL: BAC (Biological activity or effect), except adverse; BIN (Biosynthetic preparation); BGS (Biological study, unclassified); BIO (Biological study); BPF (Preparation)
 (screening method for acetylcholinesterase inhibitors)

LG ANSWER 6 OF 16 HAYAKAWA, TATEMOTO, & AKA

ACCESSION NUMBER: 144773-26-2P

DOCUMENT NUMBER: 144773-26-2P

TITLE: Antibiotic NK901093A, its manufacture with Streptomyces, and insecticide and acaricide containing NK901093A

INVENTOR(S): Inawa, Takeo; Hayaoka, Tatsumi; Kobayashi, Masuko; Masui, Akio; Kurokawa, Takashi; Nakagawa, Taizo

PATENT ASSIGNEE(S): Nippon Kayaku Kk, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

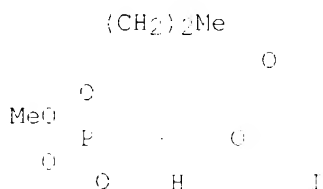
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06016859	A2	19940301	JP 1991-207234	19910725
PRIORITY APPLN. INFO.:			JP 1991-207234	19910725

GI



AB Antibiotic NK901093A (I), useful as an insecticide and acaricide, is manufd. by culturing I-producing Streptomyces sp. *S. lavendulae* NK901093 (FERM P-11713) was shake-cultured in a medium contg. glycerin, soybean powder, and NaCl at 27.degree. for 2 days, aerobically cultured in the same medium for 1 day, aerobically cultured in a similar medium at 27.degree. for 65 h, filtered, and the filtrate (90 L) was processed to manuf. 36 mg L⁻¹ of inhibitor of acetylcholinesterase from houseflies with 50% inhibitory concn. at 1.1 x 10⁻⁵ M. Formulation examples and

physicochem. properties of I and properties of the S. Lavendulae are not given.

IT 156312-04-8, NK 901093A

FI: BIOL (Biological study)

(acetylcholinesterase-inhibiting insecticide and acaricide, from Streptomyces lavendulae)

L6 ANSWER 7 OF 26 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1993:1299 HCAPLUS

DOCUMENT NUMBER: 1299:1299

TITLE: Cyclophostin, acetylcholinesterase inhibitor from Streptomyces lavendulae

AUTHOR(S): Kurokawa, Takashi; Takai, Kiyoshi; Hayaoka, Tatsumi; Nakagawa, Taizo; Izawa, Takeo; Kobayashi, Masuko; Harada, Nobuyuki

CORPORATE SOURCE: Appl. Microbiol. Res. Cent., Nippon Kayaku Co. Ltd., Ageo, 362, Japan

SOURCE: Journal of Antibiotics (1993), 46(8), 1415-18

CODEN: JANTAB; ISSN: 0021-8818

DOCUMENT TYPE: Journal

LANGUAGE: English

AB In the course of screening program for natural insecticides of natural origin, the authors isolated a new product, cyclophostin (I), from Streptomyces lavendulae strain NK901093 as a strong inhibitor of acetylcholinesterase. I showed one of the strongest inhibitory activity values for the acetylcholinesterase of houseflies: 150 7.6 .times. 10-10M. The authors report here the isolation and structure of compd. I including its abs. stereochem. I is probably the same as TAN-1139, a compd. disclosed in the Japanese patent literature but whose structure has not been previously described.

IT 144773-26-2, Cyclophostin

FI: BIOL (Biological study)

(acetylcholin esterase inhibitor, from Streptomyces lavendulae, isolation and structure of)

L6 ANSWER 3 OF 26 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1993:2472 HCAPLUS

DOCUMENT NUMBER: 118:2472

TITLE: Fermentative preparation of antibiotic NK901093 as insecticide and miticide.

INVENTOR(S): Kurokawa, Takashi; Hayaoka, Tatsumi; Izawa, Takeo; Kobayashi, Masuko; Kiriwara, Shigeki; Nakagawa, Taizo

PATENT ASSIGNEE(S): Nippon Kayaku Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04145089	A2	19920519	JP 1990-266451	19901005
PRIORITY APPLN. INFO.:			JP 1989-266451	19901005

GI

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IT 144773-26-2P, NK 901093

FI: BIF (Bioindustrial manufacture); BIOL (Biological study); PREI (Preparation)
(manuf. of, with Streptomyces, as insecticide and miticide)

L6 ANSWER 9 OF 26 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1994:034022 H-100008

DOCUMENT NUMBER: 100-441147-100

TITLE: Application of the Baker-Campbell-Hausdorff formula to the
 commutator of the generators of the Lie algebra of the
 general linear group.

AUTHOR(S): Cadoogan, J. T. G.; Cameron, Donald K.; Gosney, Ian;

CORPORATE SOURCE: Milroy, Edward J.; Wyse, Stuart J.; Amaro, Alicia
Dep. Chem., Univ. Edinburgh, Edinburgh, EH9 3JJ, UK

SOURCE: Exp. Chem., Univ. Edinburgh, Edinburgh, EH9 3JU, UK
Journal of the Chemical Society, Perkin Transactions
1: Organic and Bio-Organic Chemistry (1972-1999)
(1991), (9), 20:1-7

CODEN: JCPRB4; ISSN: 0200-922X

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 115:274722

GI

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C I

AB The effectiveness and limitations of 3-oxabicyclo[3.2.0]hept-6-ene-2,4-dione (I) (cyclobut-3-ene-1,2-dicarboxylic anhydride) as an acetylene equiv. in both 1,3-dipolar and Diels-Alder cycloaddns. is reported; it reacted readily with a variety of reagents, including N-benzylideneaniline N-oxide, nitrile oxides, diazomethane, cyclopentadiene, tetracyclone, anthracene, 1,2,5-triphenylphosphole 1-oxide and 1,3-diphenylisobenzofuran. In all cases, the sterically favored anti-isomers are formed exclusively. The configuration of the Diels-Alder adducts are assigned as endo with the exception of that from tetracyclone (and possibly 1,3-diphenylisobenzofuran) for which an exo-structure is assumed on the basis of steric arguments. Adducts were not obtained with several other reagents; possible reasons for this lack of reactivity are discussed. When subjected to flash vacuum pyrolysis, the adducts underwent thermal fragmentation, either by a retro-cleavage, or by loss of maleic anhydride to form products that are derived formally from reaction of acetylene in the cycloaddn. step. A concerted pathway is proposed for

the pyrolytic conversion into the 'linear' acetylene by a concerted rather than a stepwise radical mechanism.

IT **137411-69-9P**

PL: SPN (Synthetic preparation); PREP (Preparation)
(prepn., configuration and flash vacuum pyrolysis of)

L6 ANSWER 10 OF 26 HCAPLUS COPYRIGHT 1983 ACC

ACCESSION NUMBER: 1986:04:013 HCAPLUS

DOCUMENT NUMBER: 104:0436

TITLE: 6,7-Eliminylene-2-methylcyclo[3.1.0]heptane-1,4-diolide, prepared from 6,7-Eliminylene and 2-methylcyclo[3.1.0]heptane-1,4-diolide

AUTHOR(S): Fitch, Caroline M.; Chodosh, Daniel F.; Koenig, John; Berry, William F.

CORPORATE SOURCE: Univ. Chem., Univ. Pennsylvania, Philadelphia, PA, USA
JOURNAL OF ORGANIC CHEMISTRY, Chemical

SOURCE: 1986, 51(14), 5815-22

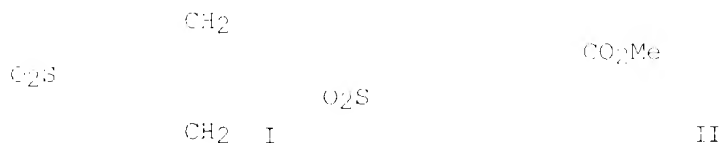
INDEX: CASREACT; ISSN: 0362-0268

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 104:0436

CI



AB Previous limitations of highly reactive 6,7-Eliminylene (I) as a tandem annulating reagent in Diels-Alder reactions are overcome using its masked form I, and subsequent extrusion at 500°C by flash vacuum pyrolysis. E.g., Diels-Alder reaction of I with HC(O)Ph and COMe in Et₂O gave 6,7-adduct II which was converted to Me 1,4,6,7-tetrahydronaphth-2-oate on flash vacuum pyrolysis at 500.degree..

IT **33974-24-2**

PL: RCT (Reactant); RACT (Reactant or reagent)
(esterification and redn. of)

L6 ANSWER 11 OF 26 HCAPLUS COPYRIGHT 1983 ACC

ACCESSION NUMBER: 1986:04:022 HCAPLUS

DOCUMENT NUMBER: 104:69022

TITLE: Synthesis of 1,5-dienes via [2 + 2] photocycloadditions between 2,5-dihydrothiophene 1,1-dioxides (sulfolenes) and .alpha.,.beta.-unsaturated cyclic ketones and anhydrides. Synthesis of 10-hydroxygeraniol

AUTHOR(S): Williams, John R.; Lin, Charles; Chodosh, Daniel F.

CORPORATE SOURCE: Dep. Chem., Temple Univ., Philadelphia, PA, USA

SOURCE: JOURNAL OF ORGANIC CHEMISTRY, 1985, 50(26), 5815-22

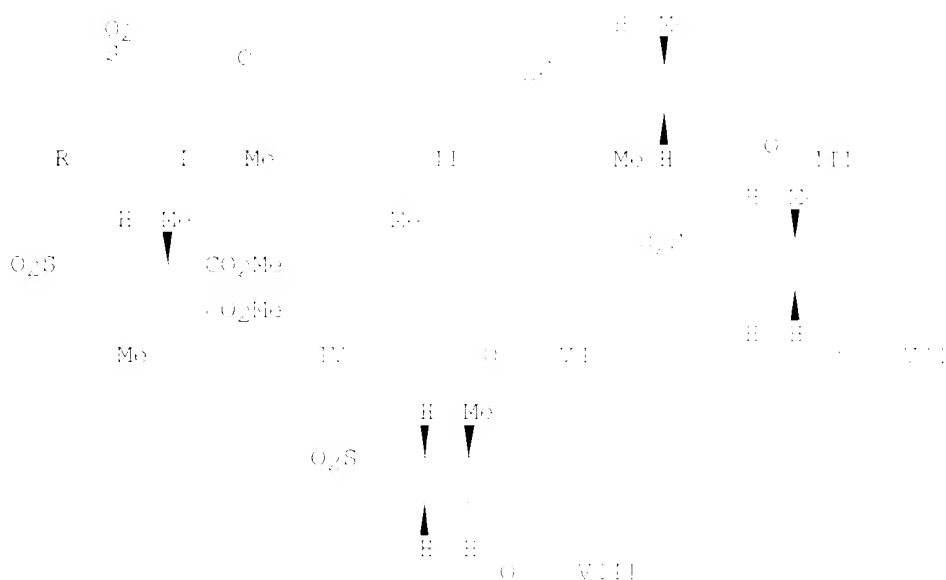
INDEX: JCEAH; ISSN: 0362-0268

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 104:69022

GI



- AB Photocycloaddn. reaction of cycloocta-1,5-diene (I) with cyclohexenone (VI) to give photoadduct VII, esterification of which gave ester III. Flash vacuum pyrolysis of IV or its trans isomer, and subsequent isomerization of IV with NaOMe, gave a mixt. of the 4 geometric isomers of MeO₂CCMe:CHCH₂CHCH₂CCMe:CH₂OMe (V) via Cope rearrangement of the 1,7-divinyl intermediate. Redn. of (E,E)-V gave (E,E)-HO(CH₂CCMe:CHCH₂)₂OH (10-hydroxygeraniol). Several other examples of this method are given, one of which involved photocycloaddn. of I (R = H) with cyclohexenone VI to give photoadducts VII and VIII, the structures of which were confirmed by x-ray crystallog.
- IT **82535-14-6P 99685-39-9P**
 FL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prep., esterification, and flash vacuum pyrolysis of)

L6 ANSWER 12 OF 26 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1983:612362 HCAPLUS

DOCUMENT NUMBER: 99:212362

TITLE: Dehydrogenative vacuum pyrolysis: a novel synthetic technique. Conversion of cycloocta-1,5-diene into styrene and related materials

AUTHOR(S): Rankin, Caroline M.; Ellis, T. L. A.; Gentry, Ian; Hamill, Brendan J.; Newlands, Stephen F.; Whan, David A.

CORPORATE SOURCE: Dep. Chem., Univ. Edinburgh, Edinburgh, EH9 3JJ, UK

SOURCE: Journal of the Chemical Society, Chemical

Communications (1983), (13), 725-6

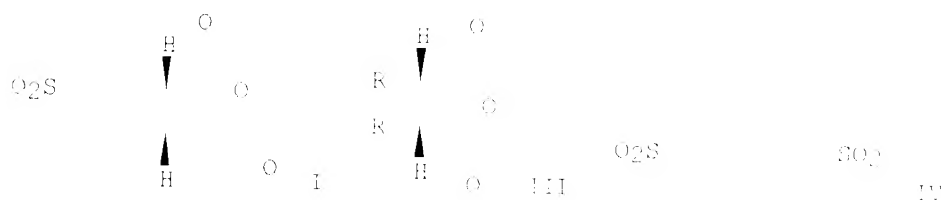
CODEN: JCCCAT; ISSN: 0022-4986

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 99:212362

GI



AB Vacuum pyrolysis of the bicyclic compd. I in the presence of 1,4-dioxane at 100.degree. gave phthalic anhydride (II). Chlorine treatment of compound III (R₂ = (CH₃CH₂)₂, R = CH₃CH₂) gave 1,4-dioxane. Pyrolysis of the bisulfone IV and 1,5-cyclooctadiene in the presence of 1,4-dioxane gave PhCH:CH₂ in 12 and 6% yield, resp.

IT 33974-24-2

EL: RCT (Reactant); RACT (Reactant or reagent)
(dehydrogenative vacuum pyrolysis of, phthalic anhydride (y))

L6 ANSWER 13 OF 26 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1983:71904 HCAPLUS

DOCUMENT NUMBER: 98:71904

TITLE: 3-Thiabicyclo[3.2.0]hept-6-ene 3,3-dioxide: a novel synthon for cis-1,2-divinyl intermediates and derived seven-membered ring systems

AUTHOR(S): Aitken, F. Alan; Cadogan, J. I. G.; Gosney, Ian; Hamill, Brendan J.; McLaughlin, Leo M.

CORPORATE SOURCE: Dep. Chem., Univ. Edinburgh, Edinburgh, EH9 3JU, UK

SOURCE: Journal of the Chemical Society, Chemical Communications (1982), (23), 1164-5

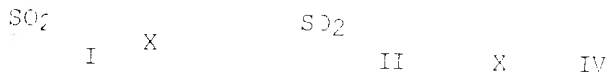
CODEN: JCCCAT; ISSN: 0262-4936

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 98:71904

GI



AB Functionalization of the double bond of the title compd. (I), followed by extrusion of SO₂ gave cis-1,2-divinyl intermediates which underwent Cope rearrangement to give 7-membered rings. E.g., peroxidn. of I with HC(O)OOH for 48 h at 55.degree. gave II (X = O) (III) in 39% yield; pyrolysis of III at 580.degree. and 10-3 mm Hg gave IV (X = O) in 55% yield. Similarly, pyrolysis of II (X = NCO₂Et), prepd. by photolysis of I in Et azidoformate, gave IV (X = NCO₂Et).

IT 33974-24-2

EL: RCT (Reactant); RACT (Reactant or reagent)
(oxidative decarboxylation of)

IT 84451-46-7P

EL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and pyrolysis of)

L6 ANSWER 14 OF 26 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1982:471910 HCAPLUS

DOCUMENT NUMBER: 97:71910

\mathbb{R} O_2S

R II

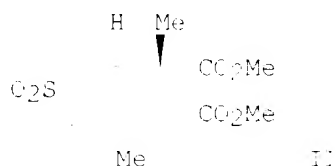
AB The dienes 8-11 (R = H, CH₃, CH₂CH₃, CH₂CH₂CH₃, CH₂CH₂CH₂CH₃, CH₂CH₂CH₂CH₂CH₃, CH₂CH₂CH₂CH₂CH₂CH₃) were stereospecifically prepared in a stereoregular manner by the polymerization of 1,3-butadiene [R₁ = (CO)₂CH] (11) (R₂ = H), by polymerization of 1,3-butadiene with 1,1-dichloro-2,2-dibromoethane followed by esterification and elimination of HCl and HBr, or by rearrangement on pyrolysis at 550 degrees. Anal 12-3 mm gave δ = 1.1-1.8 + 0.1 ppm.

IT 82535-14-6

EL: RCT Reactant); RACT (Reactant or reagent)
(hydrolysis of)

L6 ANSWER 15 OF 26 HCAPLITE COPYRIGHT 2005 AOL

ACCESSION NUMBER: 1982:20267 HEADLINE
DOCUMENT NUMBER: 96:20267
TITLE: Photocycloaddition of 2,5-dihydrothiophene 3,4-dioxides
to .alpha.,.beta.-unsaturated cyclic anhydrides.
Synthesis of 10-hydroxygeraniol
AUTHOR(S): Williams, John R.; Lin, Charles
CORPORATE SOURCE: Dep. Chem., Temple Univ., Philadelphia, PA, 19122, USA
SOURCE: Journal of the Chemical Society, Chemical
Communications (1981), (15), 752-3
CODEN: JCCCAT; ISSN: 0022-4936
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



AB The photochem. cycloaddn. of 2,5-dihydro-3-methylthiophene 2,S-dioxide (I) with citraconic anhydride followed by CH₂N₂ addn. gave the diester II which on flash vacuum pyrolysis (500.degree., 0.1 mm) underwent SO₂ elimination and Cope rearrangement to give (E,E-RCH:CMc(CH₂)₂CH:CMcR (III; R = CO₂Me) (IV). Redn. of IV gave the title terpene precursor III (R = CH₂OH) (V). The overall yield of V from I was 43%.

IT 79926-12-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn., esterification, and pyrolysis reactions of)

L6 ANSWER 16 OF 26 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1981:442793 HCAPLUS

DOCUMENT NUMBER: 95:42793

TITLE: Photochemical synthesis of some 3-

thiabicyclo[3.2.0]heptanes
Chalko-Adami, V. Sh.; Kulakov, K. M.; Tolstikov, A. A.

COOPERATE SOURCE: USSR

SOURCE: Organ. Medits. Ser., Biol. (1980), (2), 100-6

From: Rev. Khim. Khim. 1981, Abstr. No. 82118J

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB Title only translated.

IT 33974-24-2P

EL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of)

IT 33974-22-0P

EL: SPN (Synthetic preparation); PREP (Preparation)

(prepn., decarboxylation, bromination, ozonolysis, and reduction of)

L6 ANSWER 17 OF 26 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1981:156660 HCAPLUS

DOCUMENT NUMBER: 94:15666J

TITLE: Flash vacuum pyrolysis of the 3-thiabicyclo[3.2.0]heptane 3,3-dioxide ring system: a new stereospecific synthesis of cis-1,2-divinyl derivatives

AUTHOR(S): Cadogan, J. I. G.; Gosney, Ian; McLaughlin, Leo M.; Hamill, Brendan J.

COOPERATE SOURCE: BP Res. Cent., Sunbury-on-Thames, TW16 6LN, UK

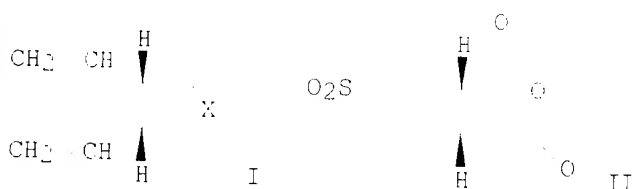
SOURCE: Journal of the Chemical Society, Chemical Communications (1980), (24), 1242-3

CODEN: JCCCAT; ISSN: 0022-4936

DOCUMENT TYPE: Journal

LANGUAGE: English

GI



AB The cis-1,2-divinyl compds. I (X = O, S, NTH2PH) were prepd. from the thiabicycloheptanedicarboxylic anhydride II. E.g., sequential esterification, redn., and cyclization of II gave 4-oxa-9-thiatricyclo[5.3.0.0]decane 9,9-dioxide, which on flash vacuum pyrolysis (10-3 mm Hg, 625.degree.) gave 62% I (X = O). The corresponding cis-1,2-divinyl anhydride and lactone derivs. were also prepd. from I by pyrolysis and sequential redn. (NaBH4, DMF) and pyrolysis, resp.

IT 77196-23-7P

EL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and flash pyrolysis of, divinyl compd. by

IT 33974-24-2

RL: RCT (Reaction); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study);
 (pyrolysis, term., and essential characteristics of term., of
 divinyl comp. n. spin. 24)

L6 ANSWER 18 OF 26 HEADLINE COPYRIGHT 2003 ACP

ACCESSION NUMBER: 1977:188542 HEADLINE

DOCUMENT NUMBER: 86:188542

TITLE: Preparative photosynthesis of anhydrides and imides of polycyclic structures

AUTHOR(S): Shalaginova, N. Ph.; Kozlov, A. A.; Kuznetsov, V. M.; Likhachev, E. V.

CORRELATE SOURCE: USSR

SOURCE: Khimiya i Fiz.-Khimiya Monomerov, 1977, 4-1

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB Title only translated.

IT 33974-22-0P 33974-24-2P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

L6 ANSWER 19 OF 26 HEADLINE COPYRIGHT 2003 ACP

ACCESSION NUMBER: 1977:1998 HEADLINE

DOCUMENT NUMBER: 86:1998

TITLE: Chemical regulation of plant growth using 3-thiabicyclo[3.2.0]heptane-6,7-dicarboxylic anhydride 3,3-dioxide

INVENTOR(S): Bloomfield, Gordon J.

PATENT ASSIGNEE(S): Monsanto Co., USA

SOURCE: U.S., 5 pp. Division of U.S. 3,873,568.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3979201	A	19760907	US 1974-524583	19741118
US 3873568	A	19750325	US 1972-275129	19720726
PRIORITY APPLN. INFO.:			US 1972-275129	19720726

GI

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O I

AB 3-Thiabicyclo[3.2.0]heptane-6,7-dicarboxylic anhydride 3,3-dioxide (1) (33974-24-2) regulates the natural growth or development of dicotyledonous plants. Thus, in small-plot expts., I applied to soybean plants at primary leaf stage (rate equiv. to .apprx.6 lb/acre) demonstrated effective retardation of vegetative growth. The synthesis of I is given.

IT 33974-24-2

RL: AGE (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study);
 USES (Uses)

(plant growth regulator)

L6 ANSWER 20 OF 26 HCAPLUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 1973:493371 HCAPLUS
 DOCUMENT NUMBER: 83:42371
 TITLE: 3-Thiabicyclo[3.2.0]heptane-6,7-dicarboxylic anhydride
 5,5-dioxide
 INVENTOR(S): Bloomfield, Jordan J.
 PATENT ASSIGNEE(S): Monsanto Co., USA
 SOURCE: U.S., 1 pp.
 CODEN: UOXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3874468	A	19750325	US 1972-275129	19720726
US 3874461	A	19760907	US 1974-0245-2	19741117
			US 1973-020128	19730201

SPECIFIC APPLN. INFO.:

GI For diagram(s), see printed CA Issue.

AB 3-Thiabicyclo[3.2.0]heptane-6,7-dicarboxylic anhydride 5,5-dioxide [33974-24-2] is a plant growth inhibitor. Thus, in greenhouse expts. 0.1b. I/acre, applied to soybeans at the primary leaf stage, decreased the height of plants by approx. 25%, compared with untreated control plants. It was prepd. by reaction of maleic anhydride [108-31-6] with 2,4-dihydrothiophene 1,1-dioxide [77-79-2] in BzMe, at 5-6.degree., under uv light.

IT 33974-24-2

RL: RDC-Biological study
 (plant growth inhibitor)

L6 ANSWER 21 OF 26 HCAPLUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 1973:71898 HCAPLUS
 DOCUMENT NUMBER: 78:71898
 TITLE: 3-Sulfonobicyclo[3.2.0]heptane-6,7-dicarboxylic acid
 anhydrides or imides
 INVENTOR(S): Shaikhrasieva, V. Sh.; Enikeev, R. S.; Tolstikov, G. A.
 PATENT ASSIGNEE(S): Institute of Chemistry, Ufa
 SOURCE: U.S.S.R. From: Otkrytiya, Izobret., Prom. Garanty, Izvarnye Znaki 1972, 49(22), 95.
 CODEN: UFXKAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Russian
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 345157		19720714	SU	19700915

GI For diagram(s), see printed CA Issue.

AB The title compds. (I) are prepd. by treating 3-sulfolene with HX (X = O, NH, or NR) in the presence of uv-radiation in acetone and a stream of inert gas.

IT 33974-24-2P

FL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

L6 ANSWER 22 OF 26 HCAPLUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 1972:153465 HCAPLUS
 DOCUMENT NUMBER: 75:153465

- TITLE:** Free-radical addition of maleic anhydride and its derivatives to 3-sulfolene
- AUTHOR(S):** Chaikhrizheva, V. Sh.; Enikeev, K. S.; Tolstikov, G. A.
- CORPORATE SOURCE:** Inst. Khim., Ufa, USSR
- SOURCE:** Zhurnal Organicheskoi Khimii (1971), 7(8), 1763
CODEN: ZORKAE; ISSN: 0514-7492
- DOCUMENT TYPE:** Journal
- LANGUAGE:** Russian
- GI** For diagram(s), see printed CA Issue.
- AB** Maleic anhydride, maleimide, and dichloromaleic anhydride + 3-sulfolene in Me₂CO under uv irradi., forming the corresponding adducts. of 6,7-dicarboxy-3-thiabicyclo[3.2.0]heptane-1,1-dioxane. 1. Free-radical, photochem. dimerization of dimethylmaleic anhydride in Me₂CO yielded 11-90% cis,trans,cis-1,2,3,4-tetraethyl-2,3,4-trimethyl-1,1,3,4-tetracarboxylic dianhydride (II). I and II gave the expected products with LiAlH₄, aq. NaOH, EtNH₂, MeOH, and NH₄.
- II** **33974-22-0P 33974-24-2P**
EL: SYN (Synthetic preparation); PREP (Preparation)
(prepn. of)
- L6** ANSWER 23 OF 26 HCAPLUS COPYRIGHT 2003 ACS
- ACCESSION NUMBER:** 1971:04030 HCAPLUS
- DOCUMENT NUMBER:** 111049
- TITLE:** Free-radical addition of maleic anhydride and its derivatives to 3-sulfolene
- AUTHOR(S):** Chaikhrizheva, V. Sh.; Enikeev, K. S.; Tolstikov, G. A.
- CORPORATE SOURCE:** Bashk. Fil., Inst. Khim., Ufa, USSR
- SOURCE:** Zhurnal Organicheskoi Khimii (1971), 7(8), 1763
CODEN: ZORKAE; ISSN: 0514-7492
- DOCUMENT TYPE:** Journal
- LANGUAGE:** Russian
- AB** UV irradi. of maleic anhydride, maleimide, or dichloromaleic anhydride with 3-sulfolene in Me₂CO afforded 3-sulfonobicyclo[3.2.0]heptane-6,7-dicarboxylic anhydride (I), the corresponding imide, and the 6,7-dichloro deriv. of I, resp., in 13-55% yield. Treatment of I with N₂H₄ gave the hydrazide, and redn. of I with LiAlH₄ in THF yielded 6,7-bis(hydroxyethyl)-3-sulfonobicyclo[3.2.0]heptane.
- IT** **33974-22-0P 33974-24-2P**
EL: SYN (Synthetic preparation); PREP (Preparation)
(prepn. of)
- L6** ANSWER 14 OF 26 HCAPLUS COPYRIGHT 2003 ACS
- ACCESSION NUMBER:** 1968:0003 HCAPLUS
- DOCUMENT NUMBER:** 67:3003
- TITLE:** Constituents of *Hyaenanche globosa*. Structure of substance C and correlation between picrotoxinin and taitins
- AUTHOR(S):** Corbella, Attilio; Commi, Giancarlo; Rindone, Bruno; Sublatico, Carlo
- CORPORATE SOURCE:** Univ. Milan, Milan, Italy
- SOURCE:** Annali di Chimica (Rome, Italy) (1967), 57(6), 758-69
CODEN: ANCHAI; ISSN: 0003-4592
- DOCUMENT TYPE:** Journal
- LANGUAGE:** Italian
- GI** For diagram(s), see printed CA Issue.
- AB** The structure I was confirmed for the compd. C16H20O7 (CA substance) isolated from the methanolic extns. of *Hyaenanche globosa* fruits. Thus, catalytic (Pd) redn. of 0.1 g. I in H₂O gave 0.07 g. II, m. 238-90.degree., [α]_D²⁰ -17.5.degree., which with POCl₃ in C₆H₅N 120 hrs. at room temp. gave III, m. 185-90.degree., [α]_D²⁰ 52.5.degree.. IV (compd. D) (CA 63: 11467c) with POCl₃ in C₆H₅N, 120 hrs. at room temp.

RU: SPN (Synthetic preparation); EREP: Preparation
(prepn. of)

ACCESSION NUMBER: 1965:74348 HCAPLUS
DOCUMENT NUMBER: 62:74348
ORIGINAL REFERENCE NO.: 62:13177d-e
TITLE: Synthesis and Chemistry of phospholes
AUTHOR(S): Campbell, D. E. M.; Campbell, B. G.; Bockman, M. B.;
Hansen, A. N.
CORPORATE SOURCE: Univ. Nottingham, UK
SOURCE: J. Chem. Soc. (1965), (1965), 1154-65
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The prepn. and properties of some phospholes (phosphacyclopentadienes) are described. The product of the reaction of 1,2,5-triphenylphosphole with CH_2N_2 is shown to be a cyclopropane deriv. (I), but the reaction of the phosphole with Me diazoacetate yields a compn. for which the ring-expanded structure (II) cannot be rigorously excluded. N.M.R. spectra were important in detg. these structures, and some interesting $\text{P}-\text{C}-\text{C}$ couplings with P have been encountered.

ACCESSION NUMBER: 1965:14347 NCAPLUS
DOCUMENT NUMBER: 62:14347
ORIGINAL REFERENCE NO.: 62:14347-1
TITLE: Inorganic phosphorus. III. Synthesis of a phosphonate and
analogs of L-alpha.-glutamylglycine
AUTHOR(S): Baer, Erich; Stanacev, Nikola Z.
CORPORATE SOURCE: Univ. Toronto, Can.
SOURCE: J. Am. Chem. Soc. (1965), 87(3), 679-80
CODEN: JACSAT; ISSN: 0002-7863

AB cf. CA 62, 2791b. The phenomenon of dialing is illustrated by

(distearoyl)lecithin was obtained via the following series of intermediates: di-*n*-butylmethylphosphonate (m.p. 17-18.degree., bromoethylphosphonate (m.p. 40-41.degree., n.p. 111-112.degree., (diethylmethyl) sintering at 130.degree., diethylmethylmethylphosphonate (m.p. 44-45.degree., (distearoyl-2-trimethylammoniumethyl)phosphonate (m.p. 198-202.degree., sintering at 195.degree., (alpha,1290 6.9.degree., (c 2.4, 1:2 vol./vol. EtOH-free CHCl₃-MeOH), 1256.02, 6.2-5.8 (d, 1H).

IT 1256-02-6, 2-Phosphabicyclo[2.2.0]hept-1(5)-ene, 2'-d-alkoxy-1-alkoxy-3,3,4-triphenyl-, 5-oxide
3 regn. (1)

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L7 ANSWER 1 OF 1 CADLD COPYRIGHT 2003 ACS

AN CA62:13177c CAOLD

TI phosphonolipids - (III) synthesis of a phosphonic acid, analog of L- α -(distaroyl)lecithin

AU Baer, Erich; Stanacev, N. Z.

[illegible]

IT	999-92-6	1010-95-5	1031-12-5	1031-13-6	1031-14-7	1034-86-6
	1045-11-0	1048-00-6	1155-35-9	1162-64-7	1162-70-9	1169-16-8
	1169-97-9	1169-98-0	1181-62-0	1223-77-4	1249-30-5	1249-32-7
	1256-02-6	1475-60-5	1475-81-6	1609-67-2	1609-68-3	
	1604-70-7	1641-67-9	1641-63-0	1641-64-1	1794-96-3	1990-89-2
	2141-46-2	2302-70-7	2857-89-8	2857-90-1	2857-91-2	2857-92-3
	3272-83-1	6886-94-8	7362-34-7	73294-90-3	95164-72-0	95263-18-6
	105862-63-3					

 \Rightarrow

=>

=> fil reg

FILE 'REGISTRY' ENTERED AT 15:52:34 ON 06 FEB 2004
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
 COPYRIGHT (C) 2003 American Chemical Society (ACS)

Property values tagged with LC are from the ZINC/VINITI data file
 provided by InfoChem.

STRUCTURE FILE UPDATED: 1 FEB 2004 HIGHLY EN 10000-104
 DICTIONARY FILE UPDATED: 1 FEB 2004 HIGHLY EN 10000-104

TSCA INFORMATION NOW CURRENT THROUGH MAY 11, 2004

Please note that search-term pricing does apply when
 conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are available. See
 PROPERTIES for more information. See STNinfo 20, Searching in 2004
 in the CAS Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes21.pdf>

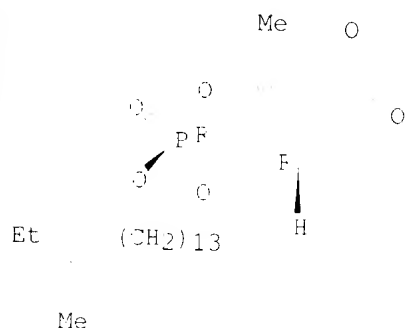
=>

=>

=> d ide can 15 tot

L5 ANSWER 1 OF 32 REGISTRY COPYRIGHT 2003 ACS
 RN 447408-07-3 REGISTRY
 CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphepin-6-one, 8,8a-dihydro-5-methyl-3-
 [(14-methylhexadecyloxy)-, 3-oxide, (3R,8aR)-rel- (XCI) (CA INDEX NAME)
 OTHER NAMES:
 CN Cyclipostin Q3
 FS STEREOSEARCH
 MF C14 H43 O6 P
 SE CA
 LC STN Files: CA, CAPLUS

Relative stereochemistry.
 Currently available stereo shown.

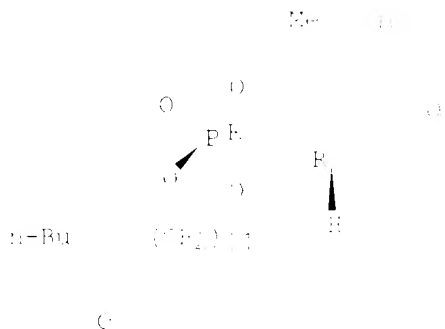


1 REFERENCES IN FILE CA (1962 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:165939

L5 ANSWER 2 OF 32 REGISTRY COPYRIGHT 2003 ACS
 RN 372092-51-6 REGISTRY
 CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphepin-6-one, 8,8a-dihydro-5-methyl-3-
 [(12-oxohexadecyl)oxy]-, 3-oxide, (3R,8aR)-rel- (9CI) (CA INDEX NAME)
 OTHER NAMES:
 CN Cyclipostin H
 FS STEREOSEARCH
 MF C23 H39 O7 P
 SR CA
 LC STN Files: CA, CAPLUS

Relative stereochemistry.
 Currently available stereo shown.



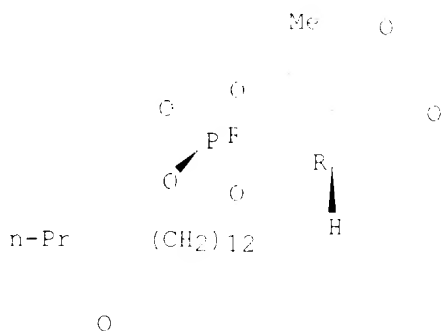
2 REFERENCES IN FILE CA (1962 TO DATE)
 2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:165939

REFERENCE 2: 135:356841

L5 ANSWER 3 OF 32 REGISTRY COPYRIGHT 2003 ACS
 RN 372092-46-1 REGISTRY
 CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphepin-6-one, 8,8a-dihydro-5-methyl-3-
 [(13-oxohexadecyl)oxy]-, 3-oxide, (3R,8aR)-rel- (9CI) (CA INDEX NAME)
 OTHER NAMES:
 CN Cyclipostin G
 FS STEREOSEARCH
 MF C23 H39 O7 P
 SR CA
 LC STN Files: CA, CAPLUS

Relative stereochemistry.
 Currently available stereo shown.



2 REFERENCES IN FILE CA 137-165939
2 REFERENCES IN FILE 135-356841

REFERENCE 1: 137:165939

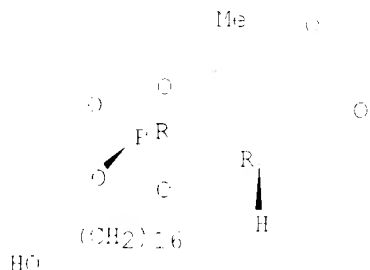
REFERENCE 2: 135:356841

LE ANSWER 4 OF 32 REGISTRY COPYRIGHT 2003 ACS
RN 372092-44-8 REGISTRY
CN 1H,6H-Furc[3,4-e][1,3,2]dioxaphospherin-6-one, 7,8a-dihydro--[11-(
3,3-dimethylhexadecyl)oxy]-5-methyl-, 3-oxide, (3R,5aR)-rel- (9CI) (CA INDEX
NAME)

OTHER NAMES:

CN Cycliposin E
FS STEREOSEARCH
MF C23 H41 O7 P
SK CA
LC STN Files: CA, CAPLIF

Relative stereochemistry.
Currently available stereo shown.



2 REFERENCES IN FILE CA 137-165939
2 REFERENCES IN FILE 135-356841

REFERENCE 1: 137:165939

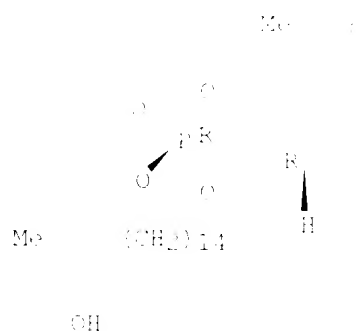
REFERENCE 2: 135:356841

LE ANSWER 5 OF 32 REGISTRY COPYRIGHT 2003 ACS
RN 372092-43-8 REGISTRY
CN 1H,6H-Furc[3,4-e][1,3,2]dioxaphospherin-6-one, 7,8a-dihydro--[11-(
hydroxyhexadecyl)oxy]-5-methyl-, 3-oxide, (3R,5aR)-rel- (9CI) (CA INDEX
NAME)

OTHER NAMES:

CN Cycliposin D
FS STEREOSEARCH
MF C23 H41 O7 P
SK CA
LC STN Files: CA, CAPLIF

Relative stereochemistry.
Currently available stereo shown.



3 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:165939

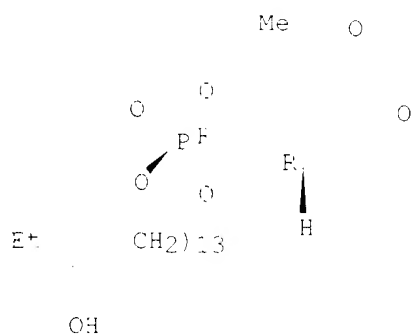
REFERENCE 2: 134:39041

15 ANSWER 6 OF 32 REGISTRY COPYRIGHT 2003 ACS
RN 372092-41-6 REGISTRY
CN 1H,6H-Furo[3,4-g][1,3,2]dioxaphosphin-6-yl, 8,8a-dihydro-3-[(14-hydroxyhexadecyl)oxy]-5-methyl-, 3-oxide, (2R,8aR)-[2]-[1901] (CA INDEX NAME)

OTHER NAMES:

CN Cyclopostin C
PS STEREOSEARCH
MF C23 H41 O7 P
SR CA
LC STN Files: CA, CAPLUS, USFATFULL

Relative stereochemistry.
Currently available stereo shown.



3 REFERENCES IN FILE CA (1962 TO DATE)
3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:165939

REFERENCE 2: 136:390111

REFERENCE 3: 135:356841

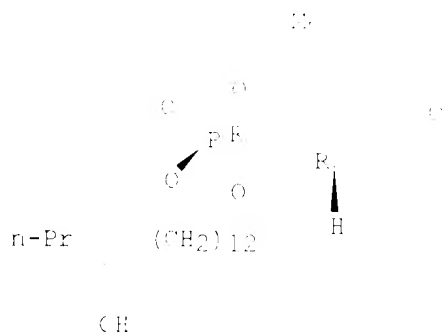
15 ANSWER 7 OF 32 REGISTRY COPYRIGHT 2003 ACS
RN 372092-36-9 REGISTRY
CN 1H,6H-Furo[3,4-g][1,3,2]dioxaphosphin-6-yl, 8,8a-dihydro-3-[(13-

hydroxyhexadecyl[oxy]-5-propyl-, 3-oxide, (3R,8aR)-rel- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN Cyclipostin B
FS STEREOSEARCH
MF C23 H41 O6 P
SR CA
LC STM Files: CA, CAPLUS, USPATFULL

Relative stereochemistry.
Currently available stereo shown.



3 REFERENCES IN FILE CA (1962 TO DATE)
3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:165939

REFERENCE 2: 136:389111

REFERENCE 3: 135:47641

15 ANSWER 3 OF 32 REGISTRY COPYRIGHT 2003 ADI

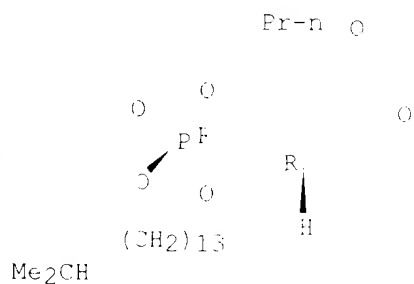
EN 372092-95-2 REGISTRY

CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphepin-6-one, 8,8a-dihydro-5-[(14-methylpentadecyl)oxy]-5-propyl-, 3-oxide, (3R,8aR)-rel- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN Cyclipostin T2
FS STEREOSEARCH
MF C25 H45 O6 P
SR CA
LC STM Files: CA, CAPLUS, USPATFULL

Relative stereochemistry.
Currently available stereo shown.



3 REFERENCES IN FILE CA (1962 TO DATE)

3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:165939

REFERENCE 2: 136:380111

REFERENCE 3: 135:356841

L5 ANSWER 4 OF 20 REGISTRY COPYRIGHT 2003 ACS

RN 272092-04-1 REGISTRY

CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphepin-6-one, 5-(hexadecyloxy)-8,8a-dihydro-, 3-oxide, (3R,8aR)-rel- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN Cycloipostin T

FS STEEOSEARCH

MF C25 H43 O6 P

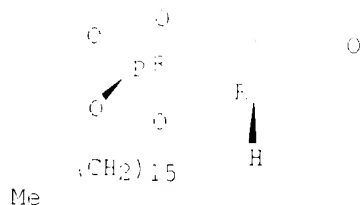
SR CA

LC STN Files: CA, CAPLUS, USPATFULL

Relative stereochemistry.

Currently available stereo shown.

Pr-n O



3 REFERENCES IN FILE CA (1962 TO DATE)

3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:165939

REFERENCE 2: 136:380111

REFERENCE 3: 135:356841

L5 ANSWER 10 OF 32 REGISTRY COPYRIGHT 2003 ACS

RN 372092-03-0 REGISTRY

CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphepin-6-one, 5-ethyl-3-(hexadecyloxy)-8,8a-dihydro-, 3-oxide, (3R,8aR)-rel- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN Cycloipostin S

FS STEEOSEARCH

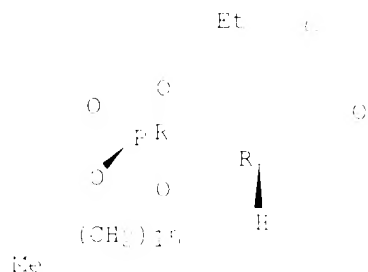
MF C21 H43 O6 P

SR CA

LC STN Files: BIOSIS, CA, CAPLUS, USPATFULL

Relative stereochemistry.

Currently available stereo shown.



3 REFERENCES IN FILE CA (1962 TO DATE)
3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

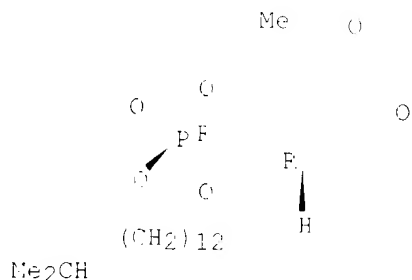
REFERENCE 1: 137:165939

REFERENCE 2: 136:350111

REFERENCE 3: 135:356841

15 ANSWER 11 OF 32 REGISTRY COPYRIGHT 2003 ACS
FN 372091-98-0 REGISTRY
CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphepin-6-one, 8,8a-dihydro-5-methyl-3-
[3-(13-methyltetradecyl)oxy]-, 3-oxide, (3R,8aR)-rel- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Cyclopostin R2
FS STEREOSEARCH
MF C22 H39 O6 P
CR CA
LC STN Files: CA, CAPLUS, USPATFULL

Relative stereochemistry.
Currently available stereo shown.



3 REFERENCES IN FILE CA (1962 TO DATE)
3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:165939

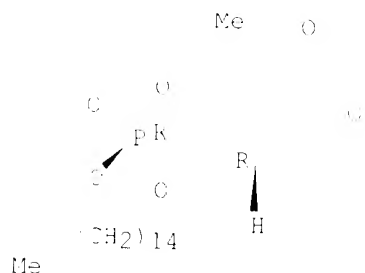
REFERENCE 2: 136:350111

REFERENCE 3: 135:356841

15 ANSWER 12 OF 32 REGISTRY COPYRIGHT 2003 ACS
FN 372091-96-8 REGISTRY
CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphepin-6-one, 8,8a-dihydro-5-methyl-3-
(pentadecyloxy)-, 3-oxide, (3R,8aR)-rel- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Cyclopostin R

FS STEREOSEARCH
 MF C22 H39 O6 P
 SR CA
 LC STN Files: CA, CAPLUS, USPATFULL

Relative stereochemistry.
 Currently available stereo shown.



3 REFERENCES IN FILE CA (1962 TO DATE)
 3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:165939

REFERENCE 2: 136:380111

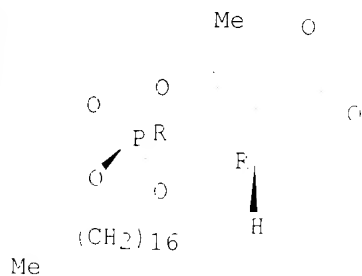
REFERENCE 3: 135:356841

L5 ANSWER 13 OF 32 REGISTRY COPYRIGHT 2003 ACS
 RH 372091-95-7 REGISTRY
 CH 1H, 1H-Euro[3,4-e][1,3,2]dioxaphosphepin-6-one, 3-(heptadecyloxy)-6,6a-dihydro-5-methyl-, 3-oxide, (3R,6aR)-rel- (901) (CA INDEX NAME)

OTHER NAMES:

CN Cyclipostin Q
 FS STEREOSEARCH
 MF C24 H43 O6 P
 SR CA
 LC STN Files: CA, CAPLUS, USPATFULL

Relative stereochemistry.
 Currently available stereo shown.



3 REFERENCES IN FILE CA (1962 TO DATE)
 3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

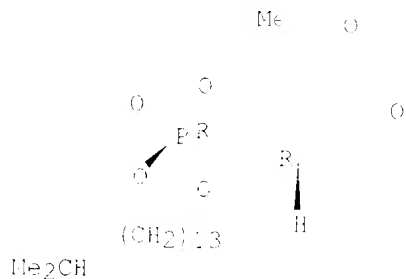
REFERENCE 1: 137:165939

REFERENCE 2: 136:380111

REFERENCE 3: 135:356841

L5 ANSWER 14 OF 32 REGISTRY COPYRIGHT 2003 ACS
 RN 372091-94-6 REGISTRY
 CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphepin-6-one, 3-(14-methylpentadecyloxy)-, 3-oxide, (3R,8aR)-rel- (9CI) (CA INDEX NAME)
 OTHER NAMES:
 CN Cyclipostin P2
 FS STEREOSEARCH
 MF C23 H41 O6 P
 SE CA
 LC STN Files: CA, CAPLUS, UNPATFULL

Relative stereochemistry.
 Currently available stereo shown.

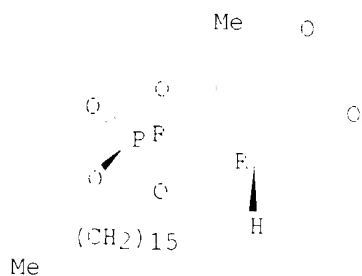


3 REFERENCES IN FILE CA (1962 TO DATE)
 3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:165939
 REFERENCE 2: 136:380111
 REFERENCE 3: 133:356841

L5 ANSWER 15 OF 32 REGISTRY COPYRIGHT 2003 ACS
 RN 372091-46-8 REGISTRY
 CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphepin-6-one, 3-(hexadecyloxy)-8,8a-dihydro-5-methyl-, 3-oxide, (3R,8aR)-rel- (9CI) (CA INDEX NAME)
 OTHER NAMES:
 CN Cyclipostin P
 FS STEREOSEARCH
 MF C23 H41 O6 P
 SE CA
 LC STN Files: CA, CAPLUS, USPATFULL

Relative stereochemistry.
 Currently available stereo shown.



3 REFERENCES IN FILE CA (1962 TO DATE)

3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:165939

REFERENCE 2: 136:380111

REFERENCE 3: 135:356841

L5 ANSWER 10 OF 32 REGISTRY COPYRIGHT 2003 ACS

RN 372090-23-2 REGISTRY

CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphepin-6-one, 8,8a-dihydro-5-methyl-3-[(14-oxohexadecyl)oxy]-, 3-oxide, (3R,8aR)-rel- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN Cyclipostin N

FS STEREOSEARCH

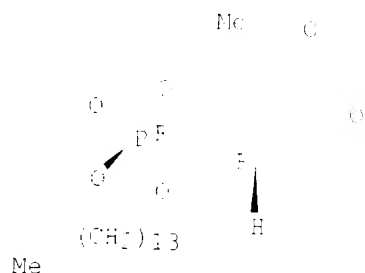
MF C01 H37 D6 P

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

Relative stereochemistry.

Currently available stereo shown.



3 REFERENCES IN FILE CA (1962 TO DATE)

3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:165939

REFERENCE 2: 136:380111

REFERENCE 3: 135:356841

L5 ANSWER 17 OF 32 REGISTRY COPYRIGHT 2003 ACS

RN 372090-27-2 REGISTRY

CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphepin-6-one, 8,8a-dihydro-5-methyl-3-[(14-oxohexadecyl)oxy]-, 3-oxide, (3R,8aR)-rel- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN Cycligostin F

FS STEREOSEARCH

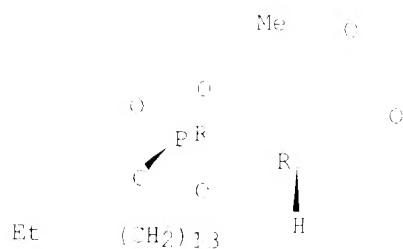
MF C23 H39 O7 P

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

Relative stereochemistry.

Currently available stereo shown.



O

3 REFERENCES IN FILE CA (1962 TO DATE)
3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:165939

REFERENCE 2: 136:380111

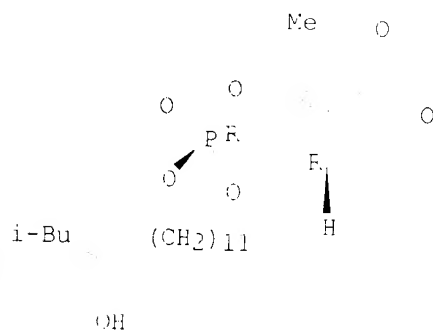
REFERENCE 3: 135:356841

L5 ANSWER 18 OF 32 REGISTRY COPYRIGHT 2003 ACS
RN 372038-34-1 REGISTRY
CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphepin-6-one, 8,8a-dihydro-3-[(12-hydroxy-13-methylpentadecyl)oxy]-5-methyl-, 3-oxide, (3R,8aR)-rel- (901) (CA INDEX NAME)

OTHER NAMES:

CN Cyclipostin A2
FS STEREOSEARCH
MF C23 H41 O7 P
SF CA
LC STN Files: CA, CAPLUS, USPATFULL

Relative stereochemistry.
Currently available stereo shown:



OH

3 REFERENCES IN FILE CA (1962 TO DATE)
3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:165939

REFERENCE 2: 136:380111

REFERENCE 3: 135:356841

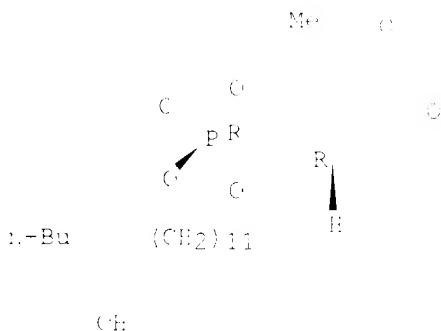
L5 ANSWER 19 OF 32 REGISTRY COPYRIGHT 2003 ACS

RN 372083-50-6 REGISTRY
 CN 1H,6H-Furo[3,4-c][1,3,4]dioxaphosphepin-6-yl, 2,4-dihydro-3-[12-hydroxyhexadecyloxy]-5-methyl-, 5-oxide, (8R,9R)-rel- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN Cyclipestin A
 FS STEREOSEARCH
 MF C23 H41 O7 P
 SR CA
 LC STM Files: CA, CAPLUS, CHEMFILE

Relative stereochemistry.



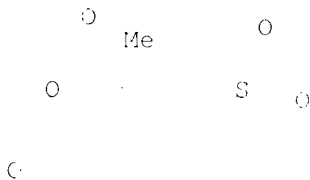
3 REFERENCES IN FILE CA (1962 TO DATE)
 3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:165939

REFERENCE 2: 136:380111

REFERENCE 3: 135:336841

L5 ANSWER 20 OF 32 REGISTRY COPYRIGHT 2003 ACS
 RN 224576-83-4 REGISTRY
 CN Thieno[3',4':3,4]cyclobuta[1,2-c]furan-1,3-dione, hexahydro-3a-methyl-, 5,5-dioxide (9CI) (CA INDEX NAME)
 FS 3D CONCORD
 MF C9 H10 O5 S
 SR CA
 LC STM Files: CA, CAPLUS, CASREACT



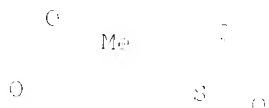
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1962 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 130:337674

L5 ANSWER 21 OF 32 REGISTRY COPYRIGHT 2003 ACS

RN 224576-81-2 REGISTRY
 CN Thieno[3',4':3,4]cyclobuta[1,2-c]furan-1,4-dione, hexahydro-3-methyl-,
 5,5-dioxide (9CI) (CA INDEX NAME)
 FS 3D CONDORD
 MF C9 H10 O5 S
 SF CA
 LC STN Files: CA, CAPLUS, CASREACT



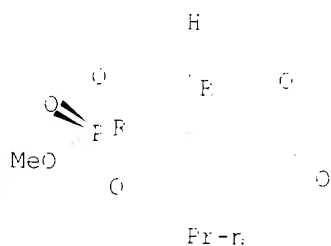
PROPERTY DATA AVAILABLE IN THE 'PROI' FORMAT

1 REFERENCES IN FILE CA (1962 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 110:337674

L5 ANSWER 22 OF 32 REGISTRY COPYRIGHT 2003 ACS
 RN 156312-24-8 REGISTRY
 CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphopin-6-one, 8,8a-dihydro-3-methoxy-5-
 propyl-, 3-oxide, (3R,8aR)- (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphopin-6-one, 8,8a-dihydro-3-methoxy-5-
 propyl-, 3-oxide, (3F-cis)-
 OTHER NAMES:
 CN UK 901006A
 FS STEFEOSEALCH
 MF C10 H15 O5 P
 SF CA
 LC STN Files: CA, CAPLUS

Absolute stereochemistry.



1 REFERENCES IN FILE CA (1962 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 121:81134

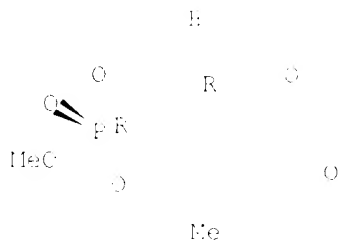
L5 ANSWER 23 OF 32 REGISTRY COPYRIGHT 2003 ACS
 RN 144773-26-2 REGISTRY
 CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphopin-6-one, 8,8a-dihydro-3-methoxy-5-
 methyl-, 3-oxide, (3R,8aR)- (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphopin-6-one, 8,8a-dihydro-3-methoxy-5-

methyl-, 3-oxide, (3R-its)-

OTHER NAMES:

CN Cyclophosphin
 CN Cyclophosphin
 CN NK 901093
 FS STEREOSEARCH
 MF C4 H11 O6 P
 SR CA
 LC STN Files: BEILSTEIN, CA, CAPLUS, CASREACT

Absolute stereochemistry.



* REFERENCES IN FILE CA (1962 TO DATE)

* REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 125:100011

REFERENCE 2: 120:72992

REFERENCE 3: 118:2472

L5 ANSWER 24 OF 32 REGISTRY COPYRIGHT 2003 ACS

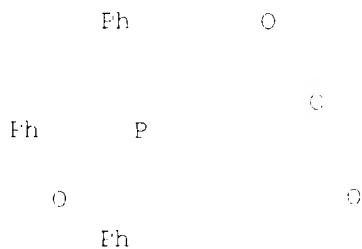
FN 137411-69-9 REGISTRY

CN 4,7-Phosphinidenebenzo[3,4]cyclobuta[1,2-c]furan-1,3-dione,
 3a,3b,4,7,7a,7b-hexahydro-4,7,8-triphenyl-, 8-oxide, stereo isomer
 (CA INDEX NAME)

MF C18 H21 O4 P

SR CA

LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT
 (*File contains numerically searchable property data)



1 REFERENCES IN FILE CA (1962 TO DATE)

1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

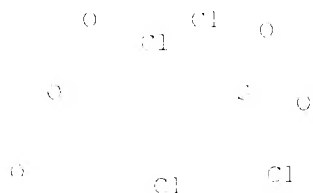
REFERENCE 1: 115:279722

L5 ANSWER 25 OF 32 REGISTRY COPYRIGHT 2003 ACS

FN 84451-46-7 REGISTRY

CN Thieno[3',4':3,4]cyclobuta[1,2-c]furan-1,3-dione, 3b,4,6,6a-
 tetrachlorohexahydro-, 5,5-dioxide (9CI) (CA INDEX NAME)

ES 3D CONCORD
MF C8 H4 C14 O5 S
LC STN Files: CA, CAPLUS



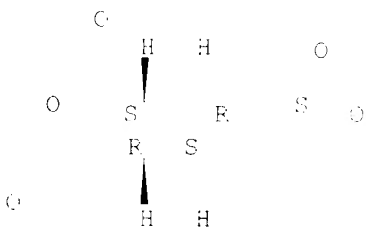
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 98:71904

L5 ANSWER 26 OF 32 REGISTRY COPYRIGHT 2003 ACS
RN 82135-14-6 REGISTRY
CN Thieno[3',4':3,4]cyclobuta[1,2-c]furan-1,3-dione, hexahydro-, 3,4-dimethyl-, (3a.alpha.,3b.beta.,6a.beta.,6b.alpha.)- (9CI) (CA INDEX NAME)
ES STEREOSEARCH
MF C8 H8 O5 S
LC STN Files: CA, CAPLUS, CASREACT

Relative stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

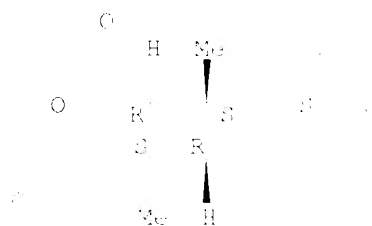
2 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 104:69022

REFERENCE 2: 97:71910

L5 ANSWER 27 OF 32 REGISTRY COPYRIGHT 2003 ACS
RN 79926-12-8 REGISTRY
CN Thieno[3',4':3,4]cyclobuta[1,2-c]furan-1,3-dione, hexahydro-3a,6a-dimethyl-, 3,5-dioxide, (3a.alpha.,3b.beta.,6a.beta.,6b.alpha.)- (9CI) (CA INDEX NAME)
ES STEREOSEARCH
RN 99385-30-9
MF C10 H12 O5 S
LC STN Files: CA, CAPLUS, CASREACT

Relative stereochemistry.

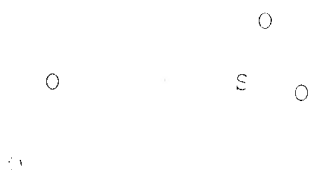


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 90:15267

LS ANSWER 26 OF 32 REGISTRY COPYRIGHT 2003 ACS
RN 77196-23-7 REGISTRY
CN Thieno[3',4':3,4]cyclobuta[1,2-c]furan-1(3H)-one, hexahydro-, 1,5-dioxide
(9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C8 H10 O4 S
LC STN Files: CA, CAPLUS, CASREACT, CHEMCATS, IFICDB, IFIPAT, IFIUDB,

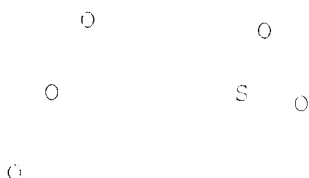


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 94:156660

LS ANSWER 29 OF 32 REGISTRY COPYRIGHT 2003 ACS
RN 33974-24-2 REGISTRY
CN Thieno[5',4':3,4]cyclobuta[1,2-c]furan-1,3-dione, hexahydro-, 3,5-dioxide
(9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3-Thiabicyclo[3.2.0]heptane-6,7-dicarboxylic anhydride, 3,3-dioxide (8CI)
FS 3D CONCORD
MF C8 H8 O5 S
LC STN Files: CA, CAPLUS, CASREACT, CHEMCATS, IFICDB, IFIPAT, IFIUDB,
USPATFULL

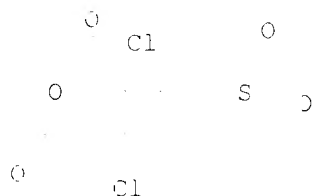


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

12 REFERENCES IN FILE CA (1962 TO DATE)
12 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 130:340074
REFERENCE 2: 105:24138
REFERENCE 3: 90:21230
REFERENCE 4: 90:21234
REFERENCE 5: 90:21235
REFERENCE 6: 90:21236
REFERENCE 7: 80:15844
REFERENCE 8: 80:15845
REFERENCE 9: 80:92877
REFERENCE 10: 70:71698

L5 ANSWER 30 OF 32 REGISTRY COPYRIGHT 2003 ACS
EN 33974-22-0 REGISTRY
CN Thieno[3',4':3,4]cyclobuta[1,2-b]furan-4,6-dione, 3B,6a-dichlorohexahydro-, 2,2-dioxide (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3-Thiabicyclo[3.2.0]heptane-6,7-dicarboxylic anhydride, 6,7-dichloro-, 3,3-dioxide (9CI)
FS 3D CONCORD
MF C8 H6 Cl2 O5 S
LC STN Files: CA, CAPLUS



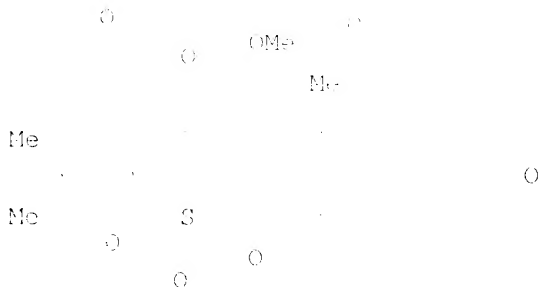
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1962 TO DATE)
4 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 95:42793
REFERENCE 2: 80:15844
REFERENCE 3: 76:15346
REFERENCE 4: 75:140530

L5 ANSWER 31 OF 32 REGISTRY COPYRIGHT 2003 ACS

RN 19600-00-1 REGISTRY
 CN Spiro[2,5-methano-7H-oxireno[3,4]cyclopent[1,2-d]oxepin-7,2'-oxiran]-1(2H)-one, 1a.beta.,1b,5.alpha.,6,6a,7a.beta.-hexahydro-1b.alpha.-hydroxy-2'-[1-hydroxy-1-methylethyl]-6.beta.-methoxy-6a.alpha.-methyl-, cyclic sulfate, (-)- (8CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Spiro[7,1b,6'-oximethoxy-1,2-bis-1H-oxepin-1,4,5'-cyclopent[1,2-d]oxepin-1,3,2-dioxolane-1,2,3'-trioxolane-1,1'-di-oxo-, 1a.beta.,6.beta.,7.alpha.,6a,7a,8a,8b,8c,8d,8e,8f,8g,8h,8i,8j,8k,8l,8m,8n,8o,8p,8q,8r,8s,8t,8u,8v,8w,8x,8y,8z.alpha.-trimethyl-, 3-oxide, (-)-
 MF C16 H20 O8 S
 LC STN Files: CA, CAPLUS, TOXENTER

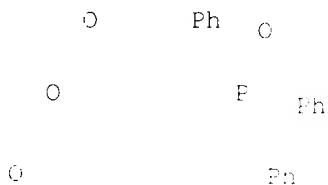


PROPERTY DATA AVAILABLE IN THE '18-4' FORMAT

1 REFERENCES IN FILE CA (1962 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 68:3008

I5 ANSWER 32 OF 32 REGISTRY COPYRIGHT 2003 ACS
 FN 1256-02-6 REGISTRY
 CN 3-Phosphabicyclo[3.2.0]hept-1(5)-ene-6,7-dicarboxylic anhydride, 2,3,4-triphenyl-, 3-oxide (7CI, 8CI) (CA INDEX NAME)
 FS 3D CONCORD
 MF C26 H19 O4 P
 LC STN Files: CA, CAOLD, CAPLUS



2 REFERENCES IN FILE CA (1962 TO DATE)
 2 REFERENCES IN FILE CAPLUS (1962 TO DATE)
 1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 62:74348

REFERENCE 2: 62:74347